CHAPTER 8   Managing Your CAMEO System

This chapter describes how to create a management plan for your CAMEO system, and proposes elements to include in that plan. It also explains how to implement CAMEO on a network, how to protect your CAMEO files, and what to do when multiple people use the same CAMEO system.

A CAMEO management plan

Before you begin to use CAMEO, consider how you intend to manage and use your new system. In this section, we describe some of the issues to consider and guidelines to follow as you prepare a CAMEO management plan for your workplace.

As you plan how you'll manage your CAMEO system, consider your intended uses of all three CAMEO components: the CAMEO modules, MARPLOT, and ALOHA.

Why make a CAMEO management plan?

It's important to plan how you intend to manage and use your CAMEO system before you dedicate resources to implementing your CAMEO, ALOHA, and MARPLOT programs, because

- A good management plan can help you to address issues before they become a problem.
- Your plan can prepare you for requesting additional resources as you require them, developing a training program, and handling future software and hardware developments.
- You can use your plan as a guide for implementing CAMEO.

Elements of a good CAMEO management plan

An effective CAMEO implementation goes beyond installing the programs, flipping through the manuals, searching for a few chemical records, and placing a few symbol objects on a MARPLOT map. To effectively implement CAMEO, you'll need to plan in advance your procedures for entering, maintaining, and using information, protecting and backing up both data and programs, training personnel, and customizing your CAMEO system. Your management plan should also address your equipment and personnel needs. An effective management plan can make CAMEO and your computer more useful tools.

Address the topics discussed below as you draft your CAMEO management plan.

Proposed uses of CAMEO. Describe your planning and response duties, and any other intended uses of your computer system.

Hardware and software. Describe your hardware inventory, including computer models, operating systems (e.g., Windows 98, Windows 2000, Macintosh System 9 or OS X, and so on), hard drive sizes and available memory (RAM), and other hardware, such as modems, storage devices, and printers. Describe your local network if you have one.

Describe your software inventory. List the word-processing, graphics, spreadsheets, database and other programs that you intend to use with your CAMEO system.

Describe your inventory of MARPLOT maps, including areas of coverage.

If you're connected to the Internet, list the addresses of websites where you can obtain resources and information you plan to use with your CAMEO system (such as the MARPLOT maps page at www.epa.gov/ceppo/cameo/ marmaps).

CAMEO system manager. Describe the position and responsibilities of the system manager. Include his or her name, telephone number(s), and email address.

CAMEO information management. Outline the procedures you'll use to enter information into CAMEO and onto the maps you'll use with CAMEO. Describe procedures for making data linkages both within CAMEO and between CAMEO and MARPLOT, and information-tracking procedures. Propose data element standards, such as acceptable common abbreviations (e.g., "St." for Street).

Describe your strategies for maintaining, tracking, and updating information. Describe your method for backing up your CAMEO system, and include a schedule (see "Implementing a CAMEO backup program" on page 231).

If you plan to import Tier II data into your CAMEO system, review "Importing data from Tier2 Submit" on page 206.

Training. Describe who will be trained and the purposes and goals of your CAMEO training program. Discuss word processing, graphics, and other skills required of trainees. Outline your proposed training program and list the subjects that you intend to cover. Describe the resources that you need to conduct your program. Include a training schedule.

CAMEO changes. Describe any modifications that you propose to make to your CAMEO system. For example, you might add items to some of the

editable pull-down menus in CAMEO modules. Plan how you'll keep track of the changes you make to CAMEO, so you'll be able to update future versions of the program.

Program security. Describe your method of ensuring program security and any procedures that you intend to use to restrict access to the program.

The CAMEO system manager

An important decision affecting your CAMEO system will be selection of the system manager. Designate one person as the system manager. This person should be experienced in using CAMEO as well as computer operating system and office software.

The responsibilities of the system manager include:

- receiving and installing program updates
- troubleshooting
- directing the training program
- ensuring that backups are made
- supervising modifications to CAMEO
- directing data entry
- ensuring program security
- developing data element standards

Some components of these tasks may be delegated to others. In essence, the system manager should be responsible for maintaining your CAMEO system and ensuring that it is used as effectively as possible. The importance of this position cannot be over-emphasized. If your system manager is not in tune with the CAMEO system, its needs, and your needs, then CAMEO may never prove to be a useful tool for you.

Preparing a plan for entering and updating data

The quality of your CAMEO system depends on the quality of the data that you enter into your system. Before you enter data, develop a data entry plan. As you develop your plan, try to answer the following questions:

a. What information do you intend to enter into CAMEO? Identify the information that can help you to perform your emergency planning and response duties.

b. How will you keep track of the information that you enter? We recommend that you bear the CAMEO Data Ownership Rule in mind as you consider this topic (see "Avoiding trouble" on page 193).

c. Do you need to develop data standards? You may want to standardize information such as facility identification numbers, abbreviations, the symbols placed in MARPLOT, and other information.

d. Do you need to develop step-by-step procedures for entering information into CAMEO? An advantage of preparing written, step-by-step procedures for entering and maintaining information is that you then can refer to these procedures during training sessions and when entering, maintaining, and verifying CAMEO information. The more you can standardize your data entry system, the better the quality of your CAMEO data, and the lower the risk of errors associated with entering multiple records for the same facility, organization, or other entity.

e. Who will be responsible for entering information? Assign data entry and maintenance responsibilities only to trained and responsible staff members. They should follow the procedures that you develop. If several people will enter and maintain your CAMEO data, be sure to develop and use an effective tracking system to minimize errors.

f. How and how often do you plan to verify or update the information in your CAMEO system? Plan to verify and update your CAMEO information regularly. Establish a schedule for verifying and updating data and stick to it (you might want to schedule data verification and updating tasks around regular fire department inspections or important EPCRA-related dates, such as reporting deadlines).

If you plan to import data into CAMEO (including Tier II data) or transfer data between copies of CAMEO, review Chapter 7, "Importing and Exporting Data," beginning on page 193.

Finally, consider how you might enhance CAMEO to better meet your data entry and management needs.

Program security

The success of your CAMEO program will depend on your ability to ensure the security of your CAMEO system.

Your CAMEO system, and the information that it contains, can easily be modified or damaged. When program security is inadequate, a novice user or failed hard drive can jeopardize your entire CAMEO system. Only well-trained, authorized users should have full access to CAMEO. You may want to limit access by other users. Such access restrictions can help to prevent unacceptable CAMEO system modifications.

There are two kinds of security concerns:

- program access.
- program backup.

As you address program security in your management plan, ask yourself:

- Who should have access to my CAMEO system?
- What methods for restricting access to CAMEO should I use (if any)?
- How will I back up my system? Who will perform backups, how, and how often? (Backing up your CAMEO data is easy and quick; see "Implementing a CAMEO backup program" on page 231.)

Password protection. One way to restrict access to your CAMEO files is to implement password protection.

All of the CAMEO files are already password-protected, but because the passwords for these files are set as defaults, users are not asked for a pass-

word when they work with CAMEO. You can change CAMEO's password-ing so that people would need to enter a password to work with your CAMEO modules. To do this, you would need to purchase a copy of File-Maker Pro.

Especially before you share your CAMEO files over a network, we recommend that you change the password(s) for your CAMEO files. Change the passwords both for the administrator and for normal users, and delete the default passwords. Once you change the password(s), people would need to enter a password to use the passworded CAMEO files. To learn how to modify passwords and delete default passwords in FileMaker files, including CAMEO, check the FileMaker Pro user's manual.

Once you make this change, any CAMEO user would need to enter a password before being able to access the data or change CAMEO records.

Other ways to use passwording to restrict access to CAMEO include

- requiring a password to log onto the computer where CAMEO is installed.
- using a password screensaver on that computer.

Implementing a CAMEO backup program. You can quickly and easily create backup archive files containing all your CAMEO data (except for the Chemical Library data), or just data from selected modules. Follow the procedures for creating export files in "Transferring data between different copies of CAMEO" on page 212: the files that you export serve as your backup files. We recommend that you

- Export all your CAMEO data into an archive file on a regular basis.
- Keep at least the two most recent archive files on physically separate storage media. Consider keeping older backups in case problems remain undiscovered until after one or more backup cycles.

Installing and running CAMEO on a network

You can install and run the CAMEO modules on a network, as explained below. You might want to do so if multiple people in your workplace need to use a single copy of CAMEO as a reference.

We recommend that MARPLOT and ALOHA be installed and run on individual users' local computers, rather than on the network. However, MARPLOT map files can be shared over a network. Check your MARPLOT manual to learn how to do this.

You can choose to network CAMEO in either of two main ways:

- From a dedicated server computer, to which every user connects over the network. This is your best choice if multiple people need to routinely use the same copy of CAMEO.
- From one user's computer, to which others on the network connect from time to time.

While we've completed some testing of CAMEO on networks, we could not emulate all possible network configurations. If you encounter problems installing or running CAMEO on your particular network, please check the CAMEO website (www.epa.gov/ceppo/cameo) for troubleshooting help and resources. More user support resources are available on the FileMaker website (www.filemaker.com/support). The comments below are provided as guidelines only.

Ensure security first

Carefully consider file security before you install CAMEO on a network and especially before you share sensitive CAMEO data, such as Tier II data, over a network. Above all, check to be sure that your network is secure, so that unauthorized people can't access your data. Consider password-protecting your CAMEO files to prevent unwanted access (see "Password protection" on page 230).

Possible configurations

You can network CAMEO and support multiple users in three ways. Which is most appropriate for you depends mainly on the number of concurrent CAMEO users you need to support. You can

- Install the runtime version of CAMEO on a network (this is the version of CAMEO that you can download and install). This configuration allows you to support just one CAMEO user at a time.

- Purchase and install a copy of FileMaker Pro, which you use to host the CAMEO files. This configuration allows you to support a limited number of concurrent users, each of whom also must have a licensed copy of FileMaker Pro. The number of users who can work with CAMEO concurrently depends on how many files each has open at the same time; fewer people can use the program when each has more files open. With this configuration, about two or three people can use CAMEO if each has all or nearly all CAMEO files open at the same time.

- Use FileMaker Pro Server for the fastest-possible CAMEO networking. This configuration allows you to support up to 100 concurrent CAMEO users, each of whom must have a licensed copy of FileMaker Pro.

Installing the runtime version on a network

You can install the runtime version of CAMEO either on a network server or in a shared directory on a networked workstation without purchasing and installing any additional software. Just one person at a time can work with the runtime version of CAMEO over a network.

To do this, just follow the instructions in "Installing the CAMEO modules" on page 15 in your CAMEO manual to install the files on your server or in a shared directory.

Using FileMaker Pro to host runtime files

The CAMEO files can be modified so that multiple people can work with them concurrently.

When FileMaker databases (such as the CAMEO modules) are set to be shared over a network, whoever first opens a particular database file (such as a CAMEO module) becomes the **host** of that file, and their computer becomes the server of the file. Other users can modify the file by connecting to the host computer.

From the CAMEO perspective, the main advantage of hosting files is that you can serve multiple concurrent users. The runtime version of CAMEO cannot host files, but you can use FileMaker Pro to host the CAMEO files on your network so that multiple people can work with them. To accomplish this, you would install both FileMaker Pro and the CAMEO modules either in a shared directory on a networked workstation or on your network server computer. Others on the network who also have installed FileMaker Pro then can work concurrently with the shared copy of CAMEO (they do not need to have installed CAMEO on their computers).

In our own tests of FileMaker Pro hosting of CAMEO on local networks, we observed the following:

- Multiple users can view the same record in Browse mode at the same time.
- Multiple people also can open the same record in Edit mode. However, as soon as one person clicks his or her cursor within an editable field, the others are locked out of Edit mode; they see an explanatory message when this happens.
- Multiple people can perform basic searches of the same CAMEO module at the same time. Multiple people also can view the advanced search dialog at the same time. However, as soon as one person selects a field to use as a search criterion, saves a set of search criteria, or opens a saved set of search criteria, the others are locked out (and are shown an explanatory message).

Important: A key to trouble-free networking of CAMEO is to be sure that only one computer hosts all the CAMEO files. We recommend that you use a dedicated computer to host CAMEO, and that you keep the CAMEO files open on that computer all the time, to prevent other users from accidentally hosting any of those files.

Follow all the procedures below to set up CAMEO for FileMaker Pro hosting.

Relocate plug-in files and indicate the directory path. Once you have installed CAMEO and FileMaker Pro on the computer that will host CAMEO, you must move some files from the locations where they were installed when you ran the CAMEO installer. You also must create a base directory file that FileMaker Pro will reference, as follows:

In Windows:

1. Copy the following files from the System folder inside the CAMEO folder into the System folder inside the folder containing FileMaker (e.g., C:\Program Files\FileMaker\FileMaker Pro 5\System):
   - fmbmp32.flt
   - fmpcx32.flt
   - fmtiff32.flt
   - Cameo.fmx
   - Marplot.fmx
   - Menu.fmx
2. Copy the NOAA_32.DLL file from the CAMEO folder into the folder containing FileMaker (e.g., C:\Program Files\FileMaker\FileMaker Pro 5).
3. Using a text editor such as WordPad, create a new text file called "BaseDirectoryList.txt" that contains (on one line) the full path of the cameo directory For example, if you installed CAMEO at the default location on the host computer, the file should contain just one line with the following text:

   C:\CAMEO
4. Place the "BaseDirectoryList.txt" file in the folder containing FileMaker.

On a Macintosh:

1. Copy the following files out of the FileMaker Extensions folder inside the CAMEO folder into the FileMaker Extensions folder inside the folder containing CAMEO (e.g., Macintosh HD:Applications:FileMaker Pro 5 Folder:FileMaker Extensions):
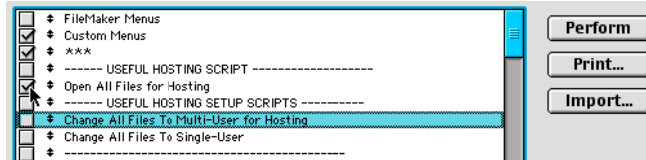   - Cameo.fmx

- Marplot.fmx
- Menu.fmx

2. Using a text editor such as SimpleText, create a new text file called "BaseDirectoryList.txt" that contains (on one line) the full path of the cameo directory. For example, if you installed CAMEO at the default location on the host computer, the file would contain just one line with the following text (if the name of your hard drive is "Macintosh HD"; otherwise, the name of your hard drive would be the first item in the line of text):

Macintosh HD:CAMEO

3. Place the "BaseDirectoryList.txt" file in the folder containing FileMaker.

Prepare the CAMEO files to be shared. Once you have installed the software, then follow the steps below to prepare your CAMEO files to be shared by multiple, networked users. You'll only need to complete these steps once.

1. From FileMaker Pro's File menu, select Open.

2. If you're working in Windows, select "All Files" from the "Files of Type" list.

3. Hold down either the Shift key in Windows or the Option key on a Macintosh as you select Navigator.CAM (inside the CAMEO folder) and click Open.

4. When prompted for a password, type "admin" and then click OK.

5. From the Scripts menu, select ScriptMaker.

6. In the list of scripts, select "Change All Files to Multi-User for Hosting," then click Perform to run the script (as shown below).
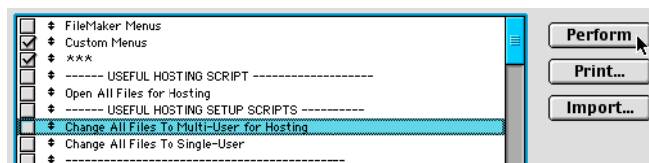
7. Click in the box next to "Open All Files for Hosting" (to check this box).

8. Click Done to close the ScriptMaker dialog.

9. From the Edit menu, Select Preferences, then Application. Set your network protocol, then click OK.

10. Quit or Exit from FileMaker.

Prepare users' computers. You'll need to make the following changes to the computer of each colleague who will work with the hosted copy of CAMEO:

1. Create a new text file called "BaseDirectoryList.txt" that contains (on one line) the full path of the CAMEO directory, as seen from the guest computer. The path may be different for each user, and may be described differently on different kinds of networks:

- On a Windows network, you must map the network drive to a specific drive letter (e.g., "F"). Once you've done that, if CAMEO is installed in the default location (C:\CAMEO) on a host computer, the path would look like:

  F:\CAMEO

- if CAMEO is installed at the top level of the host computer named "server" on a Macintosh network, the path would look like

  server:CAMEO

2. Place the "BaseDirectoryList.txt" file in the folder containing FileMaker Pro on your colleague's computer.

Next, copy the needed supporting files onto the computer:

In Windows:

1. Copy the following files into the System folder inside the folder containing FileMaker (e.g., C:\Program Files\FileMaker\FileMaker Pro 5\System):
   - fmbmp32.flt
   - fmpcx32.flt
   - fmtiff32.flt
   - Cameo.fmx
   - Marplot.fmx
   - Menu.fmx
2. Copy the NOAA_32.DLL file from the CAMEO folder into the folder containing FileMaker (e.g., C:\Program Files\FileMaker\FileMaker Pro 5).

On a Macintosh:

1. Copy the following files from the CAMEO folder into the FileMaker Extensions folder inside the folder containing FileMaker (e.g., Macintosh HD:Applications:FileMaker Pro 5 Folder:FileMaker Extensions):
   - Cameo.fmx
   - Marplot.fmx
   - Menu.fmx
2. Copy the "MacZip(FAT)" file from the CAMEO folder into the folder containing FileMaker (e.g., Macintosh HD:Applications:FileMaker Pro 5 Folder).

Begin hosting CAMEO. To begin hosting the CAMEO files over your network, follow the steps below. You must complete these six steps each time you want to start hosting the CAMEO files from a computer:

1. On the computer that will be used to host the CAMEO files, start File-Maker Pro.

2. From the File menu, select Open.

3. Click Hosts. A list of all the files that are being hosted over your network will be displayed.

4. Review the list to be sure that Navigator.CAM does not appear in the list. If it appears in the list, another computer is hosting this file. If so, ask that user to quit from FileMaker.

5. If you're working in Windows, select "All Files" from the "Files of Type" list.

6. Open Navigator.CAM. You'll be alerted that this file is being opened in multi-user mode for sharing.

7. From the Scripts menu, select Open All Files for Hosting." As each file is opened, you'll see a brief message telling you that the file is being opened for hosting.

> Opening ChemicalLibrary.CAM as multiuser to allow guest access over the network.

Accessing the hosted CAMEO. Once the CAMEO files are being hosted by a computer on your network, those colleagues on the network now can access CAMEO, as follows:

1. Start FileMaker Pro (on their computer).

2. From the File menu, select Open, then click Hosts.

3. If Navigator.CAM doesn't appear in the list of hosts, select Specify Host, type the host name or IP address of the computer hosting CAMEO, and then click Open.[1]

4. Once Navigator.CAM appears in the list of Local Hosts, select it, then click Open.

Important: Your colleagues should open *only* the copy of Navigator.CAM on the host computer. If they see that Navigator.CAM is being hosted on any other computer, you or they should ask that user to quit or exit from FileMaker pro.

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1. If you'll always use the same computer to host the CAMEO files, each CAMEO user can click "Permanently add entry to Hosts list" to add the CAMEO host's address to his or her Hosts list, before clicking Open.

Using FileMaker Pro Server

You can use FileMaker Pro Server rather than FileMaker Pro to host your CAMEO files. The advantages of this choice are that you can support many more concurrent users—up to 100 at a time—and CAMEO operations will proceed substantially faster.

If you choose this approach, you will need to install FileMaker Pro Server and the CAMEO files on a networked workstation or on a dedicated server computer. Others on the network who also have installed FileMaker Pro (but not CAMEO) then can work with the shared copy of CAMEO, concurrently. For more details on FileMaker Pro server, check the FileMaker website, www.filemaker.com.

Note: We did not specifically test CAMEO hosting via FileMaker Pro Server, but our best understanding is that if you choose this approach, you will need to prepare your files as explained in "Using FileMaker Pro to host runtime files" on page 233.

Managing multiple users

We recommend that you plan your CAMEO projects so that multiple people do not routinely use CAMEO on your network at the same time. We especially recommend that you manage your workflow to avoid having multiple people working concurrently over a network to edit records and/or perform CAMEO operations that require the most computer power, such as searching the Chemical Library or adding records. The program needs time to complete scripts and respond to user commands, and CAMEO operations are slower over a network.

We recommend that you avoid importing and exporting data to or from a hosted copy of CAMEO via client computers over your network. Instead, whenever you or your colleagues need to import or export data, work either on the host computer or on a copy of CAMEO that is not networked.

Managing data entry by multiple people. You sometimes may need to have multiple people entering CAMEO data. For example, if you receive Tier II data from many facilities, you may need to give a stack of Tier II

forms to each of several data entry operators who then would create new Facilities records to contain that Tier II data.

When you need to have multiple people entering data concurrently, we suggest that each person be given a copy of the runtime version of CAMEO[2], into which he or she adds records, rather than having everyone making editing changes to a single, networked copy of CAMEO.

When each data entry operator has completed adding records, he or she should export a file containing those records, by following the procedure in either "Exporting data from all records in a CAMEO module" on page 213 if records have been added to just one module, or "Exporting data from all CAMEO modules" on page 213 if records have been added to multiple modules.

The data file exported by each data entry operator can then be imported into a central, networked copy of CAMEO (as shown in Figure 1), by following the procedure in "Importing data from another copy of CAMEO" on page 218.

Using CAMEO if you already have FileMaker

When you follow the instructions in Chapter 2, "Installing CAMEO," beginning on page 13, you install the runtime version of CAMEO.

We recommend that as you work with CAMEO, you use the runtime version of CAMEO even if you already have a copy of FileMaker Pro, *unless* you are hosting CAMEO on a network (see "Installing and running CAMEO on a network" on page 232).

If you aren't hosting the CAMEO files, there is no advantage to running CAMEO in FileMaker Pro rather than as a runtime program, because all of CAMEO's features are available in the runtime version. Using the runtime

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2. That is, a copy of CAMEO that has not been modified for multiuser hosting.
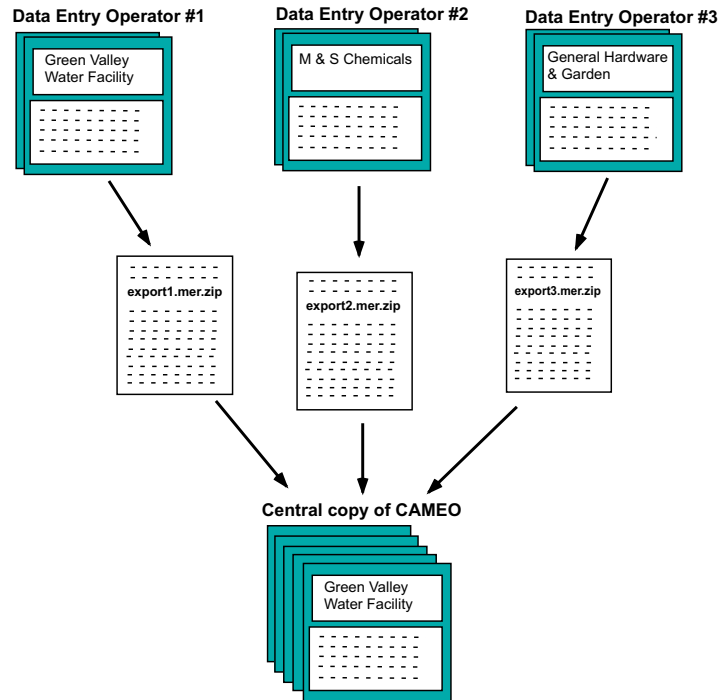
FIGURE 1. Managing data entry by multiple people: each operator exports a file of data that is imported into a central copy of CAMEO.

version avoids two potential problems that you could encounter if you were to run CAMEO in FileMaker Pro:

- If you run CAMEO in FileMaker Pro, you can inadvertently change internal parts of the program and damage CAMEO features. For example, if you use FileMaker's New Record menu command to create a new record in a CAMEO module, rather than using CAMEO's corresponding command, the data fields in the new record may not be set correctly.

- When you install the runtime version as described in Chapter 2, the installer ensures that all needed files and plug-ins are installed into the correct directories, so that CAMEO will function correctly. Before you can run CAMEO in FileMaker Pro, you would need to relocate some

supporting files (as explained in "Using FileMaker Pro to host runtime files" on page 233).